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EXAMINER	
LIN, WEN TAI	
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2454	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/507,228	WIDERA ET AL.	
	Examiner	Art Unit	
	Wen-Tai Lin	2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 25 – 55 are presented for examination.

2. The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

Claim Rejections - 35 USC § 103

3. Claims 25-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. [U.S. Pat. No. 6614763].

4. As to claims 25-26 and 29, Kikuchi teaches the invention substantially as claimed including: a method for automatically indicating status information via an output device, the status information including at least one of a status of a component of a measuring system, a status of a connection of the measuring system, and a measurement result of the measuring system [e.g., Abstract; i.e., indicating an available bandwidth of a network path], the method comprising:

sending measurement packets from a first measuring computer to a second measuring computer over a measurement path with an adjustable distribution in time so as to determine first

status information regarding the measurement path [e.g., col. 12, line 42 – col.13, lines 25; Figs. 7 & 10].

Kikuchi teaches that the available bandwidth can be derived by checking to see if a Q parameter exceeds a predetermined threshold [e.g., col. 12, lines 31-39], followed by reporting and automatically updating the obtained bandwidth values [e.g., Fig. 8; col. 13, lines 26-67]. Kikuchi is silent about assigning the available bandwidth to a quantized range of a plurality of fixed bandwidth ranges.

However, setting status information to represent a quantized value in accordance with the achievable accuracy of the status information is well known in the art. For example, each analog-to-digital device has its inherent accuracy that limits the number digital levels in the output. Likewise, Kikuchi's available bandwidth is also limited by its inherent accuracy that is imposed by the various parameters involved such as packet sending speeds, packet size, Q parameter threshold, etc.

It would have been obvious to one of ordinary skill in the art that Kikuchi's available bandwidth is inherently limited to a number of levels and, for reporting purpose, each bandwidth value can be symbolized to a corresponding level because it is meaningless to report the bandwidth value beyond its band of accuracy.

5. Claims 25-52 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cruickshank et al. [U.S. PGPub 20030126256] in view of Kikuchi et al. [U.S. Pat. No. 6614763].

6. As to claims 25 and 29, Cruickshank teaches the invention substantially as claimed including: a method for automatically indicating status information via an output device, the status information including at least one of a status of a component of a measuring system, a status of a connection of the measuring system, and a measurement result of the measuring system [e.g., Abstract], the method comprising:

sending measurement packets with an adjustable distribution in time [i.e., collection of packets containing measured data are set to a desired, adjustable period] so as to determine first status information [e.g., paragraphs 30 and 47].

assigning first status information to a first status range of a plurality of fixed status ranges according to at least one first predetermined condition, the first status range being limited by at least one first threshold value [e.g., paragraphs 7-8];

outputting the assigned first status range [e.g., paragraph 139; Fig.3; Table 5]; and

automatically updating the first status information at a predetermined time interval [paragraphs 132-139; 142-146], wherein the outputting is performed so as to enable an easy identification of the assigned first status range [Tables 1 and 5].

Cruickshank's teachings focus on analyzing and reporting data collected from network elements [e.g., 42-46, Fig.2]. Cruickshank is silent about how the collected data is obtained. However, it is well known that certain network performance information, such as delay time and bandwidth associated with a network path, is derived out of measurement between the starting and ending network points. For example, Kikuchi teaches a system of monitoring network available bandwidth by actually sending probe packets from a first network node to a second

network node and use the measured sample packets to estimate the available bandwidth of the monitored network path.

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Cruickshank's system could have been expanded to include the network path information (such as path delay or available bandwidth) because the latter also forms a important part of a network's behavior, and that together with other collected information Cruickshank's system could provide end users better status information of the network.

7. As to claim 26, Cruickshank teaches that the method further comprises:

assigning second status information to a second status range [e.g., the second metric] of the plurality of fixed status ranges according to at least one second predetermined condition, the second status range being limited by at least one second threshold value ;

outputting the assigned second status range [e.g., table 5]; and

automatically updating the second status information at the predetermined time interval [paragraphs 32, 143].

8. As to claims 27 and 28, Cruickshank further teaches that the measuring system includes at least a portion of a telecommunications network, wherein that the telecommunications network includes at least one of an internet and an intranet [e.g., paragraph 24].

9. As to claims 30-31, Cruickshank further teaches that the outputting includes displaying the assigned first status range in a graphic using an output device [e.g., Figs. 3-6] and further

comprising displaying the first status information in the graphic using the output device, wherein the graphic includes a matrix [e.g.,Tables1 and 5; note that a table has its elements/cells arranged as a matrix]

10. As to claims 32-34, Cruickshank further teaches that the graphic includes a graphical user interface, a first level of the first status range on the graphical user interface having at least one underlying representation level capable of being made visible by activation in the first level, wherein the graphical user interface includes a window [Figs. 3-6 and 8, each of which is a window], wherein at least one of the first status information and the first status range is displayed, relative to the first level, in increased detail in the at least one underlying representation level [note that Fig.8 shows increased details of an element in Figs. 3-5].

11. As to claim 35, Cruickshank further teaches that each of the status ranges has a respective different color so as to individualize each respective status range [e.g. paragraph 144].

12. As to claim 36, Cruickshank further teaches that:

the plurality of status ranges includes a second status range; and

the first status range reflects a magnitude of a first measurement result of the sending, and the second status range reflects a value describing a status of a first component of the measuring system [Fig.3; Table 5; note that in accordance with the passage at paragraph 30, the collected CMTS data such as CMTS traps, SNR and CMTS resets are by itself reflecting the status of the CMTS].

13. As to claim 37, Cruickshank further teaches that the measuring system includes a first and a second measuring computer [e.g., 12-14, Fig.1] and a control computer [e.g., 20, Fig.1] configured to control the first and second measuring computer; and

the first status information is based on at least one of a status of the first measuring computer, a quality of a measurement connection between the first and second measuring computers, a reachability of at least one of the first and second measuring computers by the control computer, a time synchronization of the first and second measuring computers, and a currentness of the status information [e.g., paragraphs 30-31].

14. As to claim 38, Cruickshank further teaches that a first component of the measuring system includes a measuring computer; the first status information relates to a status of the measuring computer; and the displaying the first status information includes displaying the first status information in an assigned first field in a first column of the matrix [See Table 5].

15. As to claim 39, Cruickshank further teaches that the outputting includes displaying the assigned first status range in a matrix of a graphic using the output device, and further comprising:

displaying the first status information in an assigned first field in a first column of the matrix, the first status information being based on a status of the first measuring computer [e.g., first row of Table 5 represents a first modem performance metric associated with the first measuring computer];

displaying an assigned second status range in the matrix using the output device; and displaying second status information in an assigned second field in the first column of the matrix using the output device, the second status information being based on a status of the second measuring computer [e.g., second row of Table 5 represents a second modem performance metric associated with the second measuring computer].

16. As to claim 40, Cruickshank further teaches that the first and second measuring computers are represented in the assigned respective field in the first column of the matrix by a respective identifier including at least one of a name and an IP address [See the left column of Table 5, which are modem identifiers associated with their measuring computers.

17. As to claim 42, Cruickshank further teaches that a first component of the measuring system includes a measuring computer, and further comprising displaying the first status information in an assigned first field in a first column of a matrix of a graphic, the first status information being based on a status of the measuring computer, the first status information including at least one of a status of a time synchronization of the measuring computer, the reachability of the measuring computer by a control computer, and at least one error message of the measuring system regarding the measuring computer [e.g., Table 1, wherein error rates are incorporated into the calculation of the performance metrics].

18. As to claim 43, Cruickshank further teaches that a first component of the measuring system includes a measuring computer, and further comprising displaying the first status

information in an assigned first field in a first column of a matrix of a graphic, the first status information being based on a status of the measuring computer, an assignment of the measuring computer to a control computer being indicated in a respective field in a first row of the matrix [e.g., Table 5, wherein the modem a identifier is displayed in a first row of the matrix].

19. As to claims 41 and 44 - 46, since the features of these claims can also be found in claims 25-40, they are rejected for the same reasons set forth in the rejection of claims 25-40 above.

20. As to claims 47-48, Cruickshank further teaches that the outputting includes displaying the assigned first status range in a matrix of a graphic using the output device and further comprising displaying the first status information in the graphic using the output device, the graphic including a graphical user interface, a first level of the first status range on the graphical user interface [e.g., Fig. 3] having a second representation level capable of being made visible by activation in the first level, a second field of the matrix being disposed in a second row or column and including the second representation level showing a status of a first measurement connection in more detail than the first level, wherein the second representation level indicates a type of the first measurement connection between first and second measuring computers of the measuring system and a status of at least one measurement parameter determining a quality of the first measurement connection [paragraph 146; note that the lower portion 88 of Fig.3 is activated by selection of a relevant category in the upper portion 86, Fig.3].

21. As to claim 49, Cruickshank further teaches that the status of the at least one measurement parameter is based on at least one transmission characteristic in the first measurement connection [e.g., paragraph 13].

22. As to claim 50, Cruickshank further teaches that the at least one transmission characteristic includes at least one of a packet delay, an IP delay variation, and a packet loss [e.g., paragraphs 8 and 13; i.e., the network characteristics includes packet delay and loss].

23. As to claim 51, Cruickshank further teaches that the second representation level has a subordinate third representation level showing measurement results in detail over a predetermined period of time [e.g., 94, Fig. 3; Fig. 8].

24. As to claim 52, Cruickshank further teaches that the outputting includes displaying, using an output device, the assigned first status range in a matrix of a graphic including a graphical user interface, and further comprising displaying the first status information in the matrix using the output device, a first level of the first status range on the graphical user interface having a subordinate second representation level capable of being made visible by activation in the first level, the second representation level displaying system messages [e.g., 86, 88, Fig.3; paragraph 146].

25. As to claim 55, Cruickshank further teaches that the adjustable distribution in time comprises at least one of a constant or exponential distribution [e.g., paragraphs 30 and 47].

26. Claims 53-54 are rejected under 35 USC 103(a) as being unpatentable over Cruickshank et al. [U.S. PGPub 20030126256] and Kikuchi et al. [U.S. Pat. No. 6614763], further in view of Official Notice.

27. As to claim 53, Cruickshank teaches that the network monitoring is situated in an Intranet or Internet environments [e.g., paragraph 24]. Cruickshank is silent about the feature of using a browser to display and update the status information.

However, Official Notice is taken that Internet browser has been widely used to conduct various information presentations. It would have been obvious to one of ordinary skill in the art to use a browser, such as an Internet browser, to perform Cruickshank's display and update the status information because the Internet browser is free tool and it is already familiar to Internet users.

28. As to claim 54, Cruickshank further teaches time stamping the data packets that are obtained from all the measuring devices synchronously [e.g., paragraphs 33 and 82]. Cruickshank does not specifically use the example of monitoring communication delay between two measuring nodes. Therefore Cruickshank is silent about time stamping a data packet at the transmitting node as well as at the receiving node.

However, Official Notice is taken that measuring communication delay by actually sending a data packet by time stamping at the transmitting and receiving nodes is well known in the art. It would have been obvious to one of an ordinary skill in the art to have included

communication delay measurements and use the typical time-stamping method to measure the various delay between network nodes because: (1) communication delay is an essential part of network characteristics and (2) time-stamping a data packet for obtaining delay measurement between two stamping nodes is a efficient and feasible technique [For motivation see paragraph 13].

29. Applicant's arguments filed on 11/18/2008 for claims 25-55 have been fully considered but are moot in view of the new grounds of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday(8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(571) 273-8300 for official communications; and

(571) 273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

January 4, 2009

/Wen-Tai Lin/

Primary Examiner, Art Unit 2454